

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (currently amended): A grounding arrangement in a system for ECG monitoring in which some ~~of the~~ connector elements (14) of ~~the~~ a lead set connector (13) are alternatively used either for recording of ECG signals from measuring electrodes or for grounding of lead wire shields, characterized in that the grounding is performed through a current limiting circuit (27) exhibiting non-linear voltage-current characteristics.

Claim 2 (canceled)

Claim 3 (original): A grounding arrangement as defined in claim 1, characterized in that the current limiting circuit includes a current-limited voltage source.

Claim 4 (currently amended): A grounding arrangement as defined in claim 3, characterized in that the current limiting circuit exhibits a ~~activation of the~~ current limiting function which, when activated, is used for detection of the addition of a new measuring ~~electrodes~~ electrode.

Claim 5 (currently amended): A grounding arrangement ~~as defined in claim 1,~~ in a system for ECG monitoring in which some connector element (14) of a lead set connector (13) are alternatively used either for recording of ECG signals or for grounding of lead wire shields characterized in that the current limiting circuit consists of passive components, at least one of which exhibits non-linear voltage/current characteristics.

Claim 6 (previously presented): A grounding arrangement as defined in claim 1, characterized in that there are individual current limiting circuits for each connector element.

Claim 7 (currently amended): A grounding arrangement as defined in claim 1, characterized in that ~~one~~ a single current limiting circuit is used for more than one connector element.

Claim 8 (previously presented): A grounding arrangement as defined in claim 1 characterized in that one single current limiting circuit is used for all connector elements.

Claim 9 (original): A grounding arrangement as defined in claim 4, characterized in that the current limiting circuit (27) includes a detecting circuit (32) for detection of the addition of new measuring electrodes.

Claim 10 (original): A grounding arrangement as defined in claim 9, characterized in that the detecting circuit (32) is a comparator.

Claim 11 (original): A grounding arrangement as defined in claim 9, characterized in that the detecting circuit (32) is a analog-to-digital converter.

Claim 12 (currently amended): Method for grounding in a system for ECG monitoring in which some of the connector elements (14) of the lead set connector (13) are alternatively used either for recording of ECG signals from measuring electrodes or for grounding of lead wire shields, characterized ~~in that~~ as grounding the lead wire shields ~~are grounded~~ through a  
5 current limiting circuit (27) exhibiting non-linear voltage-current characteristics.

Claim 13 (canceled)

Claim 14 (currently amended): Method as defined in claim 12, characterized ~~in that~~ as detecting the addition of new measuring electrode ~~is detected through a~~ the current limiting circuit (27).

Claim 15 (original): Method as defined in claim 12, characterized in that the method further comprises the steps of:

measuring a current coming to said current limiting circuit, and  
when the measured current exceeds a predefined limit current, detecting the  
5 addition of new measuring electrode.

Claim 16 (new): A grounding arrangement as defined in claim 5, characterized in that there are individual current limiting circuits for each connector element.

Claim 17 (new): A grounding arrangement as defined in claim 5, characterized in that a single current limiting circuit is used for more than one connector element.

Claim 18 (new): A grounding arrangement as defined in claim 5, characterized in that a single current limiting circuit is used for all connector elements.